

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method comprising:

receiving by a client device, from a remote server, a plurality of display state definitions defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface, wherein (1) at least one of the plurality of instantiations of the user interface corresponds to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions, and (2) at least one of the plurality of display state definitions includes a plurality of display cell definitions correspondingly defining a plurality of display cells of a corresponding one of the plurality of instantiations of the user interface, at least one of the plurality of display cell definitions having a transition rule that sets one or more display state variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the display cell specified by the at least one display cell definition, said setting to facilitate determining by the client device a display state of the user interface;

determining examining locally by the client device, the one or more display state variables of the one or more display state dimensions to determine a current display state of the user interface; and

provisioning by the client device, a current instantiation of said user interface in accordance with one or more of the display state definitions associated with the determined current display state.

2. (Cancelled)

3. (Previously Presented) The method of claim 45, wherein said provisioning comprises generating by said client device a first display cell of the current instantiation of the user interface in accordance with a first of said one or more display cell definitions of one of said one or more display state definitions associated with said current display state.

4. (Previously Presented) The method of claim 3, wherein said provisioning further comprises generating by said client device a second display cell of the current instantiation of the user interface in accordance with a second of said one or more display cell definitions of the same or another of said one or more display state definitions associated with said current display state.

5. (Previously Presented) The method of claim 1, wherein said provisioning comprises generating by said client device a portion of the current instantiation of the user interface with constituting contents inherited from a pseudo instantiation of the user interface.

6. (Previously Presented) The method of claim 1, wherein said current display state is multi-dimensional.

7.-9. (Cancelled)

10. (Currently Amended) A method comprising:
provisioning locally by a client device a first instantiation of a user interface of an application for a current display state of the user interface in accordance with at least a first one of a plurality of display state definitions defining a plurality of instantiations of the user interface, including the first instantiation, for a plurality of display states of the user interface, including said current display state, with at least one of the plurality of instantiations of the user interface corresponding to a multidimensional display state, the at least one instantiation defined

by two or more of the plurality of display state definitions, with the at least first one of the plurality of display state definitions including a plurality of display cell definitions correspondingly defining a plurality of display cells of the first instantiation of the user interface, with at least one of the plurality of display cell definitions having a transition rule that sets one or more display state variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the content of display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate the client device in determining defining a next display state to transition to, when the content of the display cell is interacted with by a user;

determining locally by said client device the display state of the user interface to be said next display state based on a user's interaction with the content of the display cell of the first instantiation of the user interface, and in accordance with said corresponding display cell definition of the display cell
the one or more display state variables of the one or more display state dimensions to corresponding the one or more display state values set in response to the user interaction; and

provisioning by the client device the next instantiation of the user interface corresponding to the determined next display state of the user interface, in accordance with at least a second one of the plurality of display state definitions defining at least partially the next instantiation of the user interface.

11. (Currently Amended) A method comprising:

transmitting by a server to a remote client device, a plurality of display state definitions defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface, wherein (1) at least one of the plurality of instantiations of the user interface corresponds to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions, and (2) at least one of the plurality of display state definitions includes a plurality of display cell definitions specifying constituting

contents for a plurality of corresponding display cells of at least one of the plurality of instantiations of the user interface, at least one of the plurality of display cell definitions having a transition rule that sets one or more display state variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate determining by the remote client device a display state of the user interface; and

transmitting by the server to said remote client device, said constituting contents for said plurality of display cells for rendering an instantiation of the plurality of instantiations of said user interface on said remote client device in accordance with said plurality of display cell definitions.

12. (Previously Presented) The method of claim 11, wherein the constituting contents are constituting contents of a pseudo instantiation of the user interface to be inherited during said rendering.

13.-14. (Cancelled)

15. (Currently Amended) An article of manufacture comprising:
a storage medium; and
a plurality of programming instructions stored in the storage medium and configured to implement a user interface provision function equipped to receive from a remote server a plurality of display state definitions defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface, wherein (1) at least one of the plurality of instantiations of the user interface corresponds to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions, and (2) at least one of the plurality of display state definitions includes a plurality of display cell

definitions correspondingly defining a plurality of display cells of a corresponding one of the plurality of instantiations of the user interface, at least one of the plurality of display cell definitions having a transition rule that sets one or more display static variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate determining by the client device a display state of the user interface, to determine a current display state of the user interface, and to provision a current instantiation of said user interface in accordance with one or more of the display state definitions associated with the determined current display state.

16.-18. (Cancelled)

19. (Previously Presented) The article of claim 15, wherein said programming instructions equip said user interface provision function to perform said provisioning of the current instantiation of the user interface, by generating a portion of the current instantiation of the user interface with constituting contents inherited from a pseudo instantiation of the user interface.

20. (Previously Presented) The article of claim 15, wherein said current display state is multi-dimensional.

21. (Previously Presented) The article of claim 15, wherein the user interface provision function is a part of a selected one of a browser and an operating system.

22.-24. (Cancelled)

25. (Currently Amended) An article of manufacture comprising:
a storage medium; and

a plurality of programming instructions stored in the storage medium and configured to implement a user interface provision function equipped to

provision a first instantiation of a user interface of an application for a current display state of the user interface in accordance with at least a first one of a plurality of display state definitions defining a plurality of instantiations of the user interface, including the first instantiation, for a plurality of display states of the user interface, including said current display state, with at least one of the plurality of instantiations of the user interface corresponding to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions of the user interface, with the at least first one of the plurality of display state definitions including a plurality of display cell definitions correspondingly defining a plurality of display cells of the first instantiation of the user interface, with at least one of the plurality of display cell definitions having a transition rule that sets one or more display state variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the content of the display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate determining by the client device defining a next display state to transition to, when the content of the display cell is interacted with by a user;

determining the display state of the user interface to be said next display state based on a user's interaction with the content of the display cell of the first instantiation of the user interface, and in accordance with said corresponding display cell definition of the display cellthe one or more display state variables of the one or more display state dimensions to corresponding the one or more display state values set in response to the users interaction; and

provisioning the next instantiation of the user interface corresponding to the determined next display state of the user interface, in accordance with at least a second

one of the plurality of display state definitions defining at least partially the next instantiation of the user interface.

26. (Currently Amended) An application server comprising:
- a processor; and
- a plurality of programming instructions executed by the processor to implement a user interface provision function equipped to transmit to a remote client device,
- a plurality of display state definitions defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface, wherein (1) at least one of the plurality of instantiations of the user interface corresponds to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions, and (2) at least one of the plurality of display state definitions includes a plurality of display cell definitions specifying constituting contents for a plurality of corresponding display cells of at least one of the plurality of instantiations of the user interface, at least one of the plurality of display cell definitions having a transition rule that sets one or more display state variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate determining by the remote client device a display state of the user interface; and
- said constituting contents for said plurality of display cells for rendering an instantiation of the plurality of instantiations of said user interface on said remote client device in accordance with said plurality of display cell definitions.

27. (Previously Presented) The application server of claim 26, wherein the constituting contents are constituting contents of a pseudo instantiation of the user interface to be inherited during said rendering.

28.-29. (Cancelled)

30. (Currently Amended) A client device comprising:

a storage medium having stored therein a plurality of programming instructions to implement a user interface provision function equipped to receive from a remote server a plurality of display state definitions defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface, wherein (1) at least one of the plurality of instantiations of the user interface corresponds to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions, and (2) at least one of the plurality of display state definitions includes a plurality of display cell definitions correspondingly defining a plurality of display cells of a corresponding one of the plurality of instantiations of the user interface, at least one of the plurality of display cell definitions having a transition rule that sets one or more display state variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate determining by the client device a display state of the user interface, to determine a current display state of the user interface, and to provision a current instantiation of said user interface in accordance with one or more of the display state definitions associated with the determined current display state; and

a processor coupled to the storage medium to execute the programming instructions.

31.-33. (Cancelled)

34. (Previously Presented) The client device of claim 30, wherein said programming instructions equip said user interface provision function to perform said provisioning of the current instantiation of the user interface, by generating a portion of the current instantiation of the user interface with constituting contents inherited from a pseudo instantiation of the user interface.

35. (Previously Presented) The client device of claim 30, wherein said current display state is multi-dimensional.

36. (Previously Presented) The client device of claim 30, wherein the client device is a device selected from a group consisting of a wireless telephone, a palm sized computing device, and a notebook sized computing device.

37.-39. (Cancelled)

40. (Currently Amended) A client device comprising:
a storage medium having stored therein a plurality of programming instructions to implement a user interface provision function equipped to
provision a first instantiation of a user interface of an application for a current display state of the user interface in accordance with at least a first one of a plurality of display state definitions defining a plurality of instantiations of the user interface, including the first instantiation, for a plurality of display states of the user interface, including said current display state, with at least one of the plurality of instantiations of the user interface corresponding to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions of the user interface, with the at least first one of the plurality of display state definitions including a plurality of display cell definitions correspondingly defining a plurality of

display cells of the first instantiation of the user interface, with at least one of the plurality of display cell definitions having a transition rule that sets one or more display static variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the content of the display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate determining by the client device defining a next display state to transition to; when the content of the display cell is interacted with by a user,

determining the display state of the user interface to be said next display state based on a user's interaction with the content of the display cell of the first instantiation of the user interface, and in accordance with said corresponding display cell definition of the display cell the one or more display state variables of the one or more display state dimensions to corresponding the one or more display state values set in response to the user interaction, and

provisioning the next instantiation of the user interface corresponding to the determined next display state of the user interface, in accordance with at least a second one of the plurality of display state definitions defining at least partially the next instantiation of the user interface; and
a processor coupled to the storage medium to execute the programming instructions.

41. (Currently Amended) A server comprising:

a storage medium having stored therein a plurality of programming instructions to implement a user interface provision function equipped to transmit to a remote client device, a plurality of display state definitions defining a plurality of instantiations of a user interface of an application for a plurality of display states of the user interface, wherein (1) at least one of the plurality of instantiations of the user interface corresponds to a multidimensional display state, the at least one instantiation defined by two or more of the plurality of display state definitions, and (2) at least

one of the plurality of display state definitions includes a plurality of display cell definitions specifying constituting contents for a plurality of corresponding display cells of at least one of the plurality of instantiations of the user interface, at least one of the plurality of display cell definitions having a transition rule that sets one or more display state variables of one or more display state dimensions to corresponding one or more display state values in response to user interaction with the display cell specified by the at least one of the plurality of display cell definitions, said setting to facilitate determining by the remote client device a display state of the user interface, and

said constituting contents for said plurality of display cells for rendering an instantiation of the plurality of instantiations of said user interface on said remote client device in accordance with said plurality of display cell definitions; and

at least one processor coupled to the storage medium to execute the programming instructions.

42. (Previously Presented) The server of claim 41, wherein the constituting contents are constituting contents of a pseudo instantiation of the user interface to be inherited during said rendering.

43.-44. (Cancelled)

45. (Currently Amended) The method of claim 1, wherein each display state definition has one ore more display cell definitions correspondingly defining one or more display cells of a corresponding instantiation of the user interface, and said determining is locally made by said client device in accordance with a second display cell definition of a second of the display state definitions of the user interface for a second rendered display cell of an immediately preceding instantiation of the user interface for corresponding to an immediately preceding display state of

an immediately preceding instantiation of the user interface, with which corresponding display cell a user interacted, said second display cell definition including a state transition rule specifying that sets one or more display state variables of the one or more display state dimensions to the corresponding one or more display state values to facilitate the client device in determining the current display state as the display state of the user interface in the event a user interacts with the corresponding second rendered display cell.

46. (Cancelled)

47. (Currently Amended) The article of claim 15, wherein each of said plurality of display state definitions has one or more display cell definitions correspondingly defining one or more display cells of a corresponding instantiation of the user interface, and said programming instructions further equip said user interface provision function to make said determination in accordance with a second display cell definition of a second of the display state definitions of the user interface for a second rendered display cell of an immediately preceding instantiation of the user interface for corresponding to an immediately preceding display state of an immediately preceding instantiation of the user interface, with which corresponding display cell a user interacted, said second display cell definition including a state transition rule that sets one or more display state variables of the one or more display state dimensions to the corresponding one or more display state values to facilitate the client device in determining specifying the current display state as the display state of the user interface in the event a user interacts with the corresponding second rendered display cell.

48. (Previously Presented) The article of claim 47, wherein said programming instructions further equip said user interface provision function to perform said provisioning of the current instantiation of the user interface, by generating a first display cell of the current instantiation of

the user interface in accordance with a first of said one or more display cell definitions of one of said one or more display state definitions associated with said current display state.

49. (Previously Presented) The article of claim 48, wherein said programming instructions further equip said user interface provision function to perform said provisioning of the current instantiation of the user interface, by generating a second display cell of the current instantiation of the user interface in accordance with a second of said one or more display cell definitions of the same or another of said one or more display state definitions associated with said current display state.

50. (Cancelled)

51. (Currently Amended) The client device of claim 30, wherein each of said plurality of display state definitions has one or more display cell definitions correspondingly defining one or more display cells of a corresponding instantiation of the user interface, and said programming instructions further equip said user interface provision function to make said determination in accordance with a second display cell definition of a second of the display state definitions of the user interface for a second rendered display cell of an immediately preceding instantiation of the user interface for corresponding to an immediately preceding display state of an immediately preceding instantiation of the user interface, with which corresponding display cell a user interacted, said second display cell definition including a state transition rule that sets one or more display state variables of the one or more display state dimensions to the corresponding one or more display state values to facilitate the client device in determining specifying the current display state as the display state of the user interface in the event a user interacts with the corresponding second rendered display cell.

52. (Previously Presented) The client device of claim 51, wherein said programming instructions further equip said user interface provision function to perform said provisioning of the current instantiation of the user interface, by generating a first display cell of the current instantiation of the user interface in accordance with a first of said one or more display cell definitions of one of said one or more display state definitions associated with said current display state.

53. (Previously Presented) The client device of claim 52, wherein said programming instructions further equip said user interface provision function to perform said provisioning of the current instantiation of the user interface, by generating a second display cell of the current instantiation of the user interface in accordance with a second of said one or more display cell definitions of the same or another of said one or more display state definitions associated with said current display state.

54. (Cancelled)